

EN8909

CAD/CAM



Course Aim To enable students to analyze engineering components and solve engineering problems using computer aided design tools and to effectively use protocols created for the CNC machine code and to test using computer simulations .

Short Title

Faculty EDICT

Credits 15

Pre-requisites 60 Credits at level 7 in BEngTech (Mechanical) and EN6904 (or ENB5904)

Co-requisites None

Anti-requisites None

Version 2

Effective From September 1, 2016

Indicative NQF Level 8

Student Contact hrs 60

Self-directed hrs 90

Other directed hrs 0

Total learning hrs 150

Learning Outcomes

On successful completion of this course, students will be able to:

- 1 Use specialist CAD (computer aided Design) skills in advanced geometry feature creation methods and techniques to create solid and wire frame models.
- 2 Analyse components using finite element analysis for structural, fluid and thermal problems, and critically analyse the solution to carry out design modification.
- 3 critically analyze the concept of FMS (Flexible manufacturing system) and CIMS (Computer Integrated Manufacturing Systems)
- 4 Integrate CAD/CAM tools and develop and synthesize APT (Automatically Programmed Tool) programming for machining

NQF Sub-strand

Practical
Application of
knowledge

Practical
Application of
knowledge

Theoretical
Understanding

Theoretical
Understanding